

UNITED STATES DISTRICT COURT
DISTRICT OF MAINE

CITY OF BANGOR, MAINE,)	
Plaintiff,)	
)	
Vs.)	Docket No.
)	NO. 02-183-B-S
CITIZENS COMMUNICATIONS)	
COMPANY,)	
Defendant and Third-Party)	
Plaintiff,)	
)	
Vs.)	
)	
BEAZER EAST, INC.,)	
CENTERPOINT ENERGY RESOURCES)	
CORP., DEAD RIVER COMPANY,)	
GUILFORD TRANSPORTATION)	
INDUSTRIES, INC., NORTH)	
AMERICAN UTILITY)	
CONSTRUCTION CORP.,)	
NORTHWESTERN GROWTH)	
CORPORATION, S.E. MACMILLAN)	
COMPANY, INC., UGI)	
UTILITIES, INC. and UNITED)	
STATES ARMY CORPS OF)	
ENGINEERS,)	
Third-Party Defendants.)	

DEPOSITION OF: JOHN D. TEWHEY, PH.D., taken
before Doreen J. Boyce, RPR, pursuant to notice dated
January 8, 2004, at Friedman, Gaythwaite, Wolf &
Leavitt, Six City Center, Portland, Maine, on
February 25, 2004, commencing at 8:40 a.m.

APPEARANCES:

W. SCOTT LASETER, ESQ.
WILLIAM B. DEVOE, ESQ.
THEODORE A. SMALL, ESQ.
LESLIE ANDERSON, ESQ.
MARTHA C. GAYTHWAITE, ESQ.
JOHN HAHN, ESQ.
TODD J. GRISET, ESQ.
E. TUPPER KINDER, ESQ.

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WITNESS

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JOHN D. TEWHEY, PH.D.

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See keyword index at end of transcript.

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(Exhibits 1-5 were retained by Atty. Devoe.)

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1 JOHN D. TEWHEY, PH.D., having been duly sworn by the Notary
2 Public, was deposed and testified as follows:

3 EXAMINATION-BY ATTY. DEVOE:

4 Q. Good morning, Dr. Tewhey.

5 A. Good morning.

6 Q. My name is Bill Devoe. I represent the interests of the
7 City of Bangor, Maine, in this litigation. We are here
8 today to have a conversation about your opinions in this
9 case. And I'd like to begin that process by showing you
10 Deposition Exhibit 1. Would you please review that
11 document, sir.

12 MS. GAYTHWAITE: Is that the designation, Bill?

13 MR. DEVOE: It is.

14 (Discussion off the record.)

15 Q. Dr. Tewhey, have you seen Exhibit 1 before?

16 A. Yes.

17 Q. Is that, in fact, the designation prepared by Citizens
18 with respect to your testimony in this case?

19 A. Yes.

20 Q. Who prepared Exhibit 1?

21 A. The actual preparation -- the typing of it was done by
22 the -- Martha's law firm.

23 Q. Who prepared the words that appear in Exhibit 1?

24 A. Those are my words.

25 Q. Did you write them?

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1 A. I did not write them.

2 Q. In fact, would it be more accurate to say that a -- an
3 initial draft of Exhibit 1 was sent to you by Citizens'
4 counsel, you reviewed and corrected that draft?

5 A. I don't recall there being a draft. I don't have any
6 drafts.

7 Q. Was Exhibit 1 prepared by Citizens' counsel?

8 A. Yes. The actual preparation -- the physical preparation
9 of that, yes.

10 Q. Was your role restricted to reviewing and approving the
11 wording in Exhibit 1?

12 A. No. Those -- those words are mine. I was involved in
13 the origination of the words.

14 Q. What form was your initial draft in -- in other words,
15 did you prepare a written document that you sent to
16 Citizens' counsel or was it in the form of an e-mail or
17 was it in some other form?

18 A. No.

19 Q. What form was it in?

20 A. It was a conversation.

21 Q. All right. So, you provided verbal information to
22 counsel for Citizens who in turn prepared what is now
23 marked as Exhibit 1?

24 A. Yes.

25 MS. GAYTHWAITE: I take very good dictation.

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1 MR. DEVOE: I'm sure we could all stipulate to
2 that.

3 Q. In any event, you reviewed the final product of Exhibit
4 1 before it was sent out to other attorneys?

5 A. Yes, I did.

6 Q. And the attorney you were dealing with principally was
7 who?

8 A. Martha Gaythwaite.

9 Q. Okay. I'd like you to turn, if you would, to the back
10 part of Exhibit 1, which begins on -- following page
11 eight, there is an unnumbered first page of what I
12 assume is your resume.

13 A. Yes.

14 Q. Is that your resume?

15 A. It is.

16 Q. Was that prepared for this litigation or is it a
17 freestanding document?

18 A. It is a freestanding document.

19 Q. How frequently do you update your resume?

20 A. Not very often. I've used this resume for quite some
21 time.

22 Q. It lists publications dating back to 1975. They are not
23 in precise chronological order. And then going forward
24 to as recently as 2000. Have you published anything
25 more recently than December 2000?

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1 A. I can't think of anything.

2 Q. I'd like to spend a few moments with you talking about
3 your areas of expertise, if I may.

4 If you were to characterize your occupation, what
5 would you say?

6 A. I'm an environmental consultant.

7 Q. Yes.

8 A. And I'm a hydrogeologist, geochemist, and geologist.

9 Q. Hydrogeologist, chemist?

10 A. Geochemist.

11 Q. Geochemist and a geologist. When you -- the first term
12 you used was environmental consultant. What do you mean
13 by that term?

14 A. My job is working as -- okay. The meaning of
15 environmental consultant is I do environmental work for
16 clients.

17 Q. Would it be fair to say that although you consider
18 yourself to be an environmental consultant, the work you
19 do for clients derives from your expertise as either a
20 geologist, a geochemist, or a hydrogeologist?

21 A. Partially, yes.

22 Q. What other areas of expertise inform the work that you
23 do for clients?

24 A. Some of my work for clients involves representing --
25 representing them to the regulatory agencies and so

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1 there's interactional work that I do that is part of my
2 consulting work.

3 Q. You were, until a year or so ago, the chair of the Board
4 of Environmental Protection here in Maine; is that
5 correct?

6 A. Yes, it is.

7 Q. Are there any ethical restrictions on consulting work
8 that you do now by virtue of that immediate prior
9 status?

10 A. I'm not sure that there are. I would be reluctant to
11 represent clients to the Board of Environmental
12 Protection as long as the board members that I served
13 with are still on the board.

14 Q. Is that the only constraint -- strike that.

15 Is that the only ethical constraint that you can
16 think of with respect to the work that you are doing
17 now?

18 A. What do you mean by the type of -- with respect to the
19 work I'm doing now?

20 Q. Environmental consulting work in the wake of your
21 departure from the BEP.

22 A. That is a broad question to cover all of my consulting
23 work; is that what you're saying?

24 Q. Yes.

25 A. No. I don't -- I don't see any ethical issues there.

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1 Q. Is it your understanding that the ethical constraints,
2 if there are any, are restricted to appearing before the
3 Board of Environmental Protection and no other
4 governmental agency?

5 A. Is that two questions?

6 Q. I don't know. I hope not.

7 A. Repeat the first part of that question.

8 Q. Let me -- let me just strike the question and ask a
9 different one.

10 You indicated, if I understood you, that you felt
11 constrained not to represent clients before the Board of
12 Environmental Protection to the extent there were still
13 members of the board who were members when you were on
14 the board yourself. Did I understand that correctly?

15 A. That's right. And I'm not sure that is strictly an
16 ethical decision on my part. It's -- I just would not
17 be comfortable doing that. I had a relationship with
18 those people for eight years and to put myself in a new
19 role in front of them would just not be comfortable.
20 That has happened before with other people but I -- I
21 am -- I am not comfortable doing that.

22 Q. Would it be fair to say that if there is a rule or
23 regulation that imposes ethical constraints on you in
24 the context of client representation before state
25 agencies, you're not aware of it?

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1 A. Oh, boy.

2 Q. Would you like that read back?

3 A. I would.

4 Q. The court reporter was hoping she'd have that
5 opportunity.

6 (The reporter read the requested matter.)

7 A. If there is a rule that would -- that would restrict me
8 from interacting with state agencies, no, I'm not aware
9 of that.

10 Q. Do you consider yourself to be an expert in MGP
11 processes?

12 MS. GAYTHWAITE: You're asking if he has expertise
13 in that area?

14 MR. DEVOE: I'm asking if he considers himself to
15 be an expert in that area.

16 A. I have served as an expert previously in describing,
17 understanding, depicting the migration of MGP derived
18 products in the environment.

19 Q. That's a slightly different question than the one that I
20 was asking. So, let me bring you back to the question.
21 It might help if I defined my terms.

22 When I mean MGP processes, I mean how manufactured
23 gas plants work. And with that definition in mind,
24 setting aside fate and transport type issues, do you
25 consider yourself to be an expert in MGP processes?

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1 MS. GAYTHWAITE: Object to the form of the
2 question. I'm not sure that I understand it. If Dr.
3 Tewhey does, he can answer it.

4 A. I understand about MGP processes. I have never served
5 as an expert on subjects dealing with the physical
6 process of manufactured gas.

7 Q. You mention that you have been hired in some capacity as
8 an expert to deal with fate and transport issues in the
9 context of MGP effluents. Did I understand you
10 correctly?

11 A. Yes.

12 Q. Do you consider yourself to be an expert in the subject
13 of coal tar deposition in river sediments?

14 MS. GAYTHWAITE: Again, does he have experience in
15 that area? I'll let him answer that.

16 MR. DEVOE: Does he consider himself to be an
17 expert.

18 MS. GAYTHWAITE: The problem with that question,
19 counsel, I'm concerned you're asking for a legal
20 definition that would be decided by the court, not by
21 this expert. If you want to find out what his expertise
22 is, I have no problem with that question.

23 A. I have expertise in the migration of coal tar in the
24 environment and so to the extent that coal tar, in order
25 to get to the river environment, has to -- has to travel

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1 there, I have expertise in -- in that area.

2 Q. What is the basis for your expertise?

3 A. I have an expertise in understanding about hydrogeology,
4 how substance migrate in the subsurface, including coal
5 tar.

6 Q. All right. Would you consider yourself to be an expert
7 in fate and transport of coal tar that did not, in fact,
8 migrate through the subsurface but migrated through some
9 other mechanism, hypothetically?

10 MS. GAYTHWAITE: Same objection. In terms of your
11 asking his experience, I have no problem with that
12 question.

13 A. What -- specifically, what mechanism are you talking
14 about? Through the air? Through the --

15 Q. I won't use that hypothetical. Let's use a different
16 hypothetical. The hypothetical is this, you have a
17 manufactured gas plant that is connected to a river by a
18 sewer pipe. Wastewater entrained with coal tar goes
19 through the sewer pipe out into the river. Does your
20 expertise extend to fate and transport in that
21 hypothetical?

22 A. I would understand the transport of MGP products in
23 water and in the site specific instance where you have
24 a -- where you have a sewer and coal tar in and around
25 that sewer, I would understand the migration of coal tar

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1 in those environments.

2 Q. What's the basis for your expertise?

3 A. I'm a hydrogeologist. I understand how substances
4 migrate through soil and groundwater.

5 Q. Does your expertise extend to tidal influences in this
6 context? Let me be clearer.

7 A. Tidal?

8 Q. T I D A L.

9 A. Okay.

10 Q. Let me be clearer. Does your expertise extend to tidal
11 influences upon the deposition of coal tar contaminants
12 in river sediments, assuming the river is tidal
13 obviously?

14 A. Uh-huh. I have had experience in that area for three
15 years. I worked for BIW as they were permitting their
16 20-acre expansion into the Kennebec River which is in a
17 tidal section of the Kennebec River. I provided
18 technical review and oversight on that project,
19 including screening proposals of hydrodynamic
20 consultants, participating in the hiring of hydrodynamic
21 consultants, reviewing their work, hiring a -- a
22 consultant from the -- in this case, University of Maine
23 to provide peer review and was substantially involved in
24 that process on a tidal portion of the Kennebec River
25 from 1992 or '3 to 1995.

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1 Q. Is that your only experience?

2 MS. GAYTHWAITE: For tidal rivers?

3 MR. DEVOE: Yes.

4 A. My firm and myself were hired by the Port of St. John,
5 New Brunswick, to assess the contamination at a site
6 that had been used for a period of time by a -- a tenant
7 and then vacated and we were hired to assess the
8 contamination associated with that -- that berthing in
9 the Port of St. John. I have worked for the South
10 Portland Shipyard in South Portland on the Fore River in
11 dealing with disposal of dredge materials containing
12 PAH's from that site. There may be others.

13 Q. Would it help to take a short break so that you can
14 think about the others? I'd like as complete a list as
15 you can give me. Shall we take a five-minute break?
16 Shall we take a 10-minute break?

17 A. No. I've worked for the past five or six years on the
18 Portland Brownfields site. The Portland Brownfields
19 site was formerly part of Back Cove in Portland, has
20 been filled, and I've worked to understand the extent of
21 contamination of that site -- surficial contamination
22 and then going down into -- down through nine to 13 feet
23 of fill to understand the sediments that were part of
24 Back Cove at the turn of the century, understand the
25 contamination that was associated with those sediments.

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1 I've done work for Goudy & Stevens Boatyard in
2 Boothbay to distinguish between background and boatyard
3 produced contamination in the sediment in the bay in the
4 area of the boatyard. I've done a number of subsurface
5 investigations along Portland waterfront on Commercial
6 Street which again is filled land where the drilling has
7 gone down through the fill material into the former
8 sediments that were in Portland Harbor -- in Portland
9 Harbor prior to the -- prior to the filling.

10 Q. Does that complete the list?

11 A. Yes.

12 Q. I'd like to ask you a couple of follow-up questions, if
13 I may, with respect to each one of those.

14 The Bath Iron Works Kennebec River project, I
15 gather, was concluded in 1995 or at least your
16 involvement was concluded in 1995; would that be
17 correct?

18 A. It concluded at the time that the project was approved
19 by the Board of Environmental Protection and that, I
20 believe, was later than 1995. But I was with the -- I
21 was with the project until it was completed.

22 Q. To be a bit more general and less precise, your
23 involvement terminated sometime in the mid 1990s; fair
24 to say?

25 A. Yes.

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1 Q. Did that project involve the study of the deposition of
2 coal tar in river sediments?

3 A. It involved the study of PAH's and other contaminants in
4 river sediments.

5 Q. Did that include coal tar?

6 A. There were -- I'm not aware of MGP sites that were
7 adjacent or nearby the site on -- on the Kennebec River.

8 Q. Sorry. Didn't mean to step on your answer.

9 As best you can determine, then, it did not
10 involve coal tar; is that correct?

11 A. As you say coal tar, do you mean gloppy, viscous
12 material or do you mean PAH's in sediments that may or
13 may not have been derived from coal tar?

14 Q. I mean -- I don't mean the latter. I mean the pyrogenic
15 by-product of an MGP facility.

16 A. Okay. There was no obvious coal tar per se in the
17 vicinity of the BIW site.

18 Q. You use the word berthing in connection with the St.
19 John, New Brunswick, project.

20 A. Uh-huh.

21 Q. That may mean different things to different people. To
22 me, it suggests vessel traffic in the harbor. Is that
23 what you meant?

24 A. Yes. Vessel traffic. Right.

25 Q. Was the study focused on contamination resulting from

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1 the vessels in the harbor?

2 A. It was focused on contamination in the harbor and on the
3 landward side -- on the land and in -- in the sediment.

4 Q. All right. Did any of the St. John -- strike all of
5 that.

6 Is the St. John project ongoing?

7 A. No, it is not.

8 Q. Okay. Did any of the St. John work involve the study of
9 the deposition of coal tar in river sediments?

10 A. There were -- I was not aware of any MGP sites in the
11 vicinity of that site.

12 Q. I gather that the Fore River work did, in fact, involve
13 a former MGP facility; is that correct?

14 A. For the South Portland Shipyard?

15 Q. Yes.

16 A. I'm not aware of an MGP site adjacent to that.

17 Q. All right. I may have -- I may have something else in
18 mind.

19 With respect to the South Portland Shipyard work
20 that you did -- and perhaps I should ask the question
21 first, is that work concluded or is it ongoing?

22 A. It's concluded.

23 Q. With respect to that work -- let's go off the record.

24 (Discussion off the record.)

25 Q. With respect to that work, Dr. Tewhey, and this is the

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1 South Portland Shipyard, did any of it involve the study
2 of coal tar deposition in river sediments?

3 A. There was substantial PAH's in river sediments at that
4 site and I'm not -- I'm not aware of a coal tar site
5 that was -- I mean an MGP site that was nearby.

6 Q. With respect to the Portland Brownfields project, is
7 that ongoing or has that been concluded?

8 A. No. That's ongoing.

9 Q. Is that a VRAP?

10 A. It's a Brownfields project and it also has a VRAP.

11 Q. Did you say Back Cove --

12 A. Back Cove.

13 Q. -- in reference to that?

14 A. Yes.

15 Q. You said that had been partially filled?

16 A. Yes.

17 Q. Did -- does any aspect of the work you were doing at the
18 Portland Brownfields site involve the study of coal tar
19 deposition in river sediments?

20 A. No.

21 Q. I take it the Goudy & Stevens Boatyard is a private
22 client?

23 A. Yes.

24 Q. Located in Boothbay?

25 A. Yes.

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1 Q. And if I understood what you were telling me, you
2 were -- you are studying background PAH's compared to
3 PAH's deriving from contamination from the boatyard?

4 A. Yes.

5 Q. In the bay?

6 A. Yes.

7 Q. Does any of that work involve the study of the
8 deposition of coal tar in river sediments?

9 A. Again, it involves the study of PAH's and I'm not aware
10 of a coal tar -- an MGP site nearby.

11 Q. Lastly, the Portland waterfront work along Commercial
12 Street involving filled land, does any aspect of that
13 project or did any aspect of it involve the study of
14 coal tar deposition in river sediments?

15 A. I don't -- I don't know where the locations of --
16 location or locations of the MGP sites in Portland were
17 at the time. It may or may not have.

18 Q. As best you can determine -- strike that.

19 You are not aware of any coal tar deposition in
20 the sediments at that site?

21 A. I'm not specifically aware.

22 Q. Do you consider yourself to have expertise in coal tar
23 chemistry?

24 A. I have expertise in PAH chemistry and to the extent that
25 PAH is related to coal tar, I have expertise there.

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1 Q. If I were to show you a gas chromatogram of coal tar
2 without any labeling on it, are you confident that you
3 could identify it as coal tar?

4 A. I'm not sure.

5 Q. Does gas chromatography play a significant role in the
6 work that you do?

7 A. Often when I have analysis done, I have the
8 chromatograms as part of the analysis to understand the
9 nature of the analysis better.

10 Q. Is gas chromatography something that you are set up to
11 do yourself or do you generally contract that work out
12 to a laboratory?

13 A. I contract that work out to laboratories.

14 Q. Who do you generally use?

15 A. I have used Katahdin Analytical Services in Westbrook
16 principally.

17 Q. Do you rely on Katahdin to interpret the data or do
18 you -- are you able to interpret the data yourself?

19 A. I interpret the data myself and if I have questions, I
20 often interact with Katahdin to understand the nature
21 of -- in particular of chromatograms.

22 Q. Have you ever taken a gas chromatogram yourself?

23 A. I have not.

24 Q. You had some involvement, if I understand your resume
25 correctly, doctor, in an MGP site in Waterville, Maine?

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1 A. Yes.

2 Q. When was that?

3 A. I would say it was in the early -- in the late '90s. I
4 don't remember the exact date.

5 Q. Has that project reached a conclusion?

6 A. I'm not involved with it currently and so I'm not sure
7 if -- if it has reached a conclusion.

8 Q. What was the nature of the contamination that you were
9 working on in that case?

10 A. It was coal tar migrating through sediments below the
11 groundwater table.

12 Q. So, that called into -- called upon you to use your
13 hydrogeology training?

14 A. That's correct.

15 Q. And it was a subsurface migration issue?

16 A. Yes. Principally.

17 Q. You say principally?

18 A. Principally.

19 Q. Were there other migratory paths that you were studying?

20 A. There was a nearby stream and we assessed the presence
21 or absence of coal tar in the stream.

22 Q. Was there an allegation of coal tar being present in the
23 stream?

24 A. What do you mean by allegation?

25 Q. I mean somebody involved in the case thought there might

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1 be.

2 A. Because there was a stream -- I don't recall.

3 Q. Did you determine that there was or wasn't coal tar
4 present in the stream?

5 A. There was not coal tar present in the stream.

6 Q. Okay. I take it that was not a tidal stream?

7 A. It was not.

8 Q. Your resume also makes reference -- and I'm on page two,
9 Dr. Tewhey -- to work for MGP sites in New York State?

10 A. Yes.

11 Q. You'll find that reference under E.C. Jordan toward the
12 bottom of page two.

13 A. Okay.

14 Q. What was your precise -- well, strike that.

15 How many MGP sites were you working on in New
16 York?

17 A. I don't recall the number. I don't recall the number.

18 Q. I gather you were working for a single utility in
19 connection with multiple sites?

20 A. The company was working with NYSEG.

21 Q. Okay. And I gather it was on behalf of that single
22 utility that you were looking at more than one MGP site?

23 A. Yes.

24 Q. What was your role?

25 A. I was division leader of the environmental division at

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1 that time and so people that worked for me were working
2 on the sites. I visited the sites and I reviewed
3 reports.

4 Q. Did you do any field investigation?

5 A. I was in the field but I did not take part in the -- the
6 exploration process.

7 Q. You have a list of publications in your resume, Dr.
8 Tewhey, beginning on page three and continuing on to
9 four and it's difficult for me to tell just by the
10 titles of these publications, so let me ask you this
11 question. Do any of these publications relate to coal
12 tar?

13 A. No.

14 Q. None? You have to answer verbally.

15 A. No.

16 Q. That means that none of them do?

17 A. None of them do.

18 Q. I'd like to ask you to turn back in Exhibit 1 to the
19 second page of that exhibit. Here is the beginning of a
20 summary of your opinions in this case. Toward the
21 bottom of the second page where it says Citizens expects
22 that Dr. Tewhey will offer, do you see that paragraph?

23 A. Yes.

24 Q. The first sentence involves RMT's investigation and your
25 opinion that RMT's investigation was carried out in a

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1 unilateral manner. What do you mean by that?

2 A. I mean by that that the investigation as carried out by
3 RMT has been focused on an intended result without
4 wanting participation by outside parties.

5 Q. What was the intended result?

6 A. The intended result of their study, rather than looking
7 at multiple working hypotheses, has been to attribute
8 the PAH's in the river to a singular source having
9 traveled there by a singular mechanism.

10 Q. What is the basis for that opinion?

11 A. There are many. When I visited -- observations. When I
12 visited the site, I noted that there were numerous
13 deposits of tarry material in the crib work and along
14 the shore of Dunnett's Cove. I looked for analysis
15 sampling and analysis -- evidence of sampling and
16 analysis and results of that material that was very
17 plainly present on the shore and found none. That led
18 me to believe that there was a unwillingness to deal
19 with multiple working hypotheses because the deposits
20 were very obvious and yet unsampled.

21 I attended a meeting at the DEP in which were
22 present a representative of the attorney general's
23 office, the DEP, City of Bangor, RMT, and Citizens. I
24 have dealt with the DEP for the last 23 years. I have
25 never been present at a meeting at the DEP that -- where

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1 such control had been asserted by the City of Bangor
2 with respect to controlling the agenda and outcome of
3 the meeting. At that meeting, there was a overture on
4 the part of the City of Bangor to invite others to
5 participate; namely, Citizens. That was -- overture was
6 pulled back at a later time. Later, in preparing for
7 today, I've had occasion to review documents that have
8 been generated as part of this ongoing process. What I
9 have seen in documents, notes, e-mails generated by RMT
10 is a cavalier, almost cowboy attitude towards
11 undertaking this investigation where right from the
12 beginning, in their proposal to the City of Bangor,
13 there was the assertion that with a few focused samples
14 in particular areas, they could nail down the source of
15 the coal tar and it could be a relatively short, concise
16 investigation and that would be it. At that time, they
17 indicated that they didn't need the involvement of
18 regulatory agencies. One of those documents, RMT in
19 handwritten notes referred to regulatory agencies as
20 goons. There was not the respect for scientific method
21 that was present in their attitude and outlook towards
22 the investigation and that's why I have referred to it
23 as carried out in a unilateral manner.

24 Q. Have you described for me every basis for that opinion?

25 A. Probably not.

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1 Q. Why don't you complete the list, if you would.

2 A. In an overview of the attitude of the -- of RMT, I just
3 want to emphasize there's been an unwillingness to
4 investigate, to consider other sources for the PAH's
5 that are present in Dunnett Cove.

6 Q. Anything else?

7 A. There probably is and I will -- if I think of any, I
8 will flag that.

9 MR. DEVOE: I'm going to give you that chance. We
10 have been going for about an hour. Why don't we take
11 about a 10-minute break. Thank you very much.

12 (A short break was taken.)

13 Q. Dr. Tewhey, we took a short break. Did you have an
14 opportunity to reflect on the bases for your opinion
15 that RMT took a unilateral approach in this case?

16 A. Yes.

17 Q. And are there additional bases for that opinion?

18 A. I would just like to read into the record from the top
19 of page three.

20 Q. Well, before you do that, is -- what is the purpose for
21 your reading something into the record?

22 A. Because -- well, I could -- I could say it. I don't
23 have to read it into the record but it --

24 Q. Before you even do that, I have a question that I'd like
25 you to answer, if you don't mind.

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1 A. Okay.

2 Q. And that is are there additional bases for your opinion
3 that RMT conducted a unilateral investigation in this
4 case? That's the question I'd like you to answer.

5 A. Yes. And -- and -- and the opinion is that there are --
6 the potential sources of PAH's are varied and diverse
7 and, therefore, a careful examination of potential
8 sources is necessary and that has not been done.

9 Q. Anything else?

10 A. I can't think of any right now.

11 Q. When you speak about the meeting that took place at the
12 DEP, let me just ask you by way of background, if I
13 could, that was a meeting in approximately June of 2003;
14 does that sound right?

15 A. Late spring, early summer.

16 Q. Of 2003?

17 A. Yes.

18 Q. How long -- at that point in time, when you attended
19 that meeting, for how long had you been working for
20 Citizens?

21 A. Several months, I believe.

22 Q. Do you have a formal engagement letter with respect to
23 your work for Citizens?

24 A. No.

25 Q. Nothing that spells out when that relationship began in

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1 writing?

2 A. Not that I'm aware of.

3 Q. When were you first contacted by Citizens?

4 A. I was contacted informally by Chip Ahrens of Pierce,
5 Atwood sometime in 2002. Year 2002.

6 Q. Were you still the chair of the BEP at that time?

7 A. I was.

8 Q. What was the nature of your contact with Mr. Ahrens?

9 A. He indicated that he would like me to be involved in
10 this project.

11 Q. Did he tell you what the project was all about?

12 A. No. Not -- not all about. He gave me a very brief
13 description.

14 Q. What did he tell you?

15 A. I don't specifically recall.

16 Q. Did you make any notes?

17 A. No.

18 Q. When do you consider your professional relationship with
19 Citizens to have begun; was it that conversation?

20 A. No.

21 Q. Was it a subsequent communication?

22 A. It was subsequent to Martha's firm taking over the
23 project from Pierce, Atwood.

24 Q. Who did you next hear from after your conversation with
25 Mr. Ahrens?

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1 A. I heard from David Littell.

2 Q. What can you tell me about that?

3 A. He gave a description of the project and a -- an
4 overview of people involved.

5 Q. Did you make any notes?

6 A. No.

7 Q. Did you consider your professional relationship with
8 Citizens to have begun at that point?

9 A. No.

10 Q. When do you consider that point to have started?

11 A. I don't remember the exact date. It was after I left
12 the BEP and I -- I'm not recalling that date right now
13 either.

14 Q. You left the BEP in December of 2002; would that be
15 right?

16 A. That sounds right. I -- and I'm not -- I'm just not
17 thinking of when that was. I was appointed in June and
18 I -- and I could have gotten off in December 2002.

19 Q. Your designation indicates that you -- if you look at
20 the bottom of page one.

21 A. Okay. Okay.

22 Q. It doesn't mean that that's correct. But it says that
23 from February of 2000 to December of 2002, you were the
24 chair. Did you continue on the board --

25 A. I did continue beyond that as a member of the board.

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1 Q. So, you ceased being chair in December of 2002?

2 A. Yes.

3 Q. But you continued on as a member of the board?

4 A. That's correct.

5 Q. For how long?

6 A. Several months.

7 Q. And then you resigned or your term was --

8 A. Term was up.

9 Q. Term was up. And you think you were initially appointed
10 in June?

11 A. I believe I was.

12 Q. Is it likely that your term expired in June of 2003?

13 A. That's possible. And I -- I -- I've got a block as to
14 when that -- when that happened.

15 Q. Does it -- as you sit and think back about the meeting
16 that took place at the DEP, were you still a member of
17 the board?

18 A. No.

19 Q. Okay.

20 A. So, the reason I'm confused is that I -- that meeting
21 was in May. Then I -- I think I was still on the board;
22 therefore, I'm not -- not part of that.

23 Q. Let's see if I can find it on my calendar.

24 A. You were at that meeting.

25 Q. I was. I was indeed.

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1 (Discussion off the record.)

2 Q. When did you start billing for your services to
3 Citizens?

4 A. I -- I don't recall.

5 Q. Did you perform any billable activities for Citizens
6 prior to your attendance at this DEP meeting that you've
7 described?

8 A. I believe I would have visited the site prior to that
9 time.

10 Q. Okay. Had you done --

11 A. Do we have a date of that meeting?

12 Q. I stopped looking.

13 MR. DEVOE: Let me -- let's go off the record for
14 just a moment and I will complete my check.

15 (Discussion off the record.)

16 A. I obviously got off the board earlier than that.

17 Q. I think I had asked you what billable work you had done
18 for Citizens prior to the meeting at the DEP and you
19 indicated that you had visited the site?

20 A. And likely would have reviewed documents.

21 Q. All right. Documents provided to you by whom?

22 A. By either Martha or John's firm.

23 Q. Martha Gaythwaite or John Hahn?

24 A. Yes.

25 Q. And the nature of the documents would be what?

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1 A. It would be RMT reports, previous reports of the site,
2 including S. W. Cole and DEP reports.

3 Q. Prior to the meeting in Augusta at the Department of
4 Environmental Protection, were you provided a copy of
5 the memorandum of agreement between the City of Bangor
6 and the State of Maine with respect to RMT's work?

7 A. I don't believe so.

8 Q. Have you ever been provided with that document?

9 A. Describe the document and the date of the document
10 again.

11 Q. Well, I -- I didn't provide you with the date.

12 A. Okay.

13 Q. And frankly, sitting here, I can't.

14 A. Okay.

15 Q. But it is in general a contract according to which RMT
16 would be investigating the Penobscot River case on
17 behalf of both the city and the state as clients. Have
18 you seen that document?

19 A. Was there more than one of those documents? Was there a
20 continuation done or was there only one of those
21 documents?

22 Q. I'm not sure.

23 A. I've seen -- I've seen a document that was a memorandum
24 of understanding but my impression was that it was more
25 recent and so I -- I have seen a -- a memorandum of

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1 understanding that came from DEP files.

2 Q. Did you have any understanding when you attended the DEP
3 meeting in May of 2003 that the river investigation was
4 being conducted by RMT at the behest of both the City of
5 Bangor and the State of Maine?

6 A. I don't recall.

7 Q. In your designation, Dr. Tewhey, which is Exhibit 1
8 again, the latter part of the sentence that we began to
9 consider a few moments ago states that RMT did not
10 objectively consider alternative sources of PAH's in the
11 river. That's at the bottom of page two. Do you see
12 that?

13 A. Yes. Sources.

14 Q. I'm sorry. It's actually further up that paragraph.
15 It's a continuation of the same sentence that began with
16 the discussion of the unilateral manner.

17 A. Yeah. Okay.

18 Q. That sentence concludes with an opinion that RMT failed
19 to objectively consider alternative sources. Do you see
20 that?

21 A. Yes.

22 Q. When you use a word like objectively, what do you mean?

23 A. Objectively is without consideration of specific
24 influence. It is to -- objectively, to impartially and
25 without bias look at. What do I mean by objectively,

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1 impartially, without bias.

2 Q. Have you -- well, strike that.

3 Does the word objectively have distinct definition
4 in the field of environmental investigation or are you
5 using the term in the everyday ordinary meaning of the
6 word objectively?

7 A. I'm using that word in the ordinary everyday meaning of
8 that.

9 Q. When you say that RMT failed to consider alternative
10 sources, which alternative sources did you have in mind?

11 A. There are a number of potential sources of PAH's to the
12 river in the vicinity of the -- of Dunnett's Cove and
13 there are sources to the river that are away from
14 Dunnett's Cove.

15 Q. Can you list them for me?

16 A. In the past, there have been substantial fires on the
17 coal docks that are immediately upstream and adjacent to
18 the head of Dunnett's Cove. There is a -- has been for
19 well over a hundred years a large railroad yard
20 immediately adjacent to the entire length of Dunnett's
21 Cove. And PAH's accumulate in used rail yards. There
22 has been the transfer of products from the MGP site to
23 the rail yard for handling, storage, and shipping from
24 the rail yard. There is a paving company that is
25 located on the south end of Dunnett's Cove that

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1 handles -- has handled materials that are tarry in
2 nature. The nature is tarry. And they've off-loaded,
3 stored, and used, transferred those materials. There
4 was a former MGP plant across the river in Brewer from
5 the site. There has been petroleum storage facilities
6 in the vicinity of the site. And there's been industry
7 upstream and downstream from the site. The Penobscot
8 River has been a heavily used river, heavily
9 industrialized river for a very long time and PAH's have
10 generated by the industrial use of the -- of the river
11 that, given the nature of Dunnett's Cove, come to rest
12 in that area.

13 Q. Have you completed your answer?

14 A. Yes.

15 Q. Is your opinion that RMT failed to consider alternative
16 sources or is your opinion that RMT's consideration of
17 those sources was nonobjective?

18 A. I would -- I would say probably both.

19 Q. Which -- of the sources that you listed, which of them
20 did RMT fail to consider at all in your view?

21 A. I think they have failed to consider all of them in a
22 meaningful way.

23 Q. Well, now I don't know what you mean by meaningful.

24 What do you mean by meaningful?

25 A. That they fully consider them, that they have a method

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1 of multiple working hypotheses, that they take samples.

2 Q. When you use the term meaningful, is that -- in this
3 context, is that synonymous with objective or is it
4 something different?

5 A. It's in the same realm as objective.

6 Q. Let me take you back to the question I asked you a
7 moment ago because I want to be sure that you and I are
8 understanding each other. I asked you which of the
9 alternative sources that you listed they failed to
10 consider at all and you said that they failed to
11 consider all of them in a meaningful way. Are there any
12 alternative sources on your list that in your view RMT
13 failed to consider meaningfully, not meaningfully,
14 objectively, subjectively, or in any manner whatsoever?

15 MS. GAYTHWAITE: Object to the form of that
16 question.

17 Q. It wasn't a great question; and if you're having trouble
18 with it, I can reword it.

19 A. I am.

20 Q. I'm going to take you back to my original question which
21 was which of the alternative sources on your list did
22 RMT fail to consider at all?

23 A. I'm not aware of any sampling that was specifically
24 focused on any of those alternative sources. For
25 example, the tar present all along the shoreline could

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1 have come from any number of the sources that I've
2 described earlier. There was no sampling. There was a
3 disregard for those.

4 Q. Have you completed your answer?

5 A. Yes.

6 (Discussion off the record.)

7 Q. I'm having some difficulty with your answer to the
8 question not because you're not doing your best to
9 answer the question but because I'm not sure it's fully
10 responsive. Let me take you back to the question as I
11 posed it to you.

12 The question was are there any alternative sources
13 on your list that RMT failed to consider at all and your
14 initial response to my question was that you felt RMT
15 failed to meaningfully consider any of those sources.
16 So, I asked you to go back to setting aside meaningful
17 and just any consideration whatsoever. And now you're
18 talking about sampling which strikes me as coming under
19 the meaningful category. I want to be sure that we are
20 understanding one another. You have read the RMT
21 reports that have been generated in this case; have you
22 not?

23 A. I have.

24 Q. Have you also read Gene Shifrin -- Gene Shifrin's --
25 Gene McLinn's witness designation?

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1 A. I have but I don't specifically recall the contents of
2 it.

3 Q. That's okay. Have you read Gene McLinn's deposition
4 transcript?

5 A. I have.

6 Q. Okay. Is it your opinion that Mr. McLinn, as a
7 spokesman for RMT, failed to discuss the railroad yard
8 in any respect?

9 A. The railroad yard was discussed.

10 Q. All right. As a potential source?

11 A. As best as I can recall, yes.

12 Q. Mr. McLinn also discussed, did he not, Barrett Paving as
13 a potential source; wouldn't you agree?

14 MS. GAYTHWAITE: Can I just clarify. You're
15 talking about at the deposition, he was asked questions
16 about that or whether --

17 Q. I guess I'm restricted to the deposition because you
18 can't recall the contents of his designation. Let's
19 stay with that.

20 A. And I don't recall specifically if -- if that was
21 addressed at his deposition also.

22 Q. And I'm -- frankly, as I sit here, I'm not sure whether
23 counsel for Citizens posed questions about Barrett
24 Paving to Mr. McLinn. Would it be fair -- let me pull
25 back.

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1 Would it be fair to characterize your opinion as
2 RMT considered these alternative sources but you don't
3 feel that they considered those alternative sources
4 meaningfully or adequately in the context of this case?

5 MS. GAYTHWAITE: I'm going to object to form.
6 Maybe the problem is with the word consider.

7 MR. DEVOE: It may be.

8 A. Exactly. That is the -- that is the problem. Consider.
9 What does consider involve. Consider means talking
10 about it, thinking about it, and doing nothing about it.
11 Might that be consider? The -- the -- your opinion of
12 what consider is and my view of consider is, there is
13 probably a gap between -- in there.

14 Q. All right. Let's solve that problem. Why don't you
15 tell me what you mean by consider since that's your word
16 in your opinion.

17 A. Objectively consider alternative -- alternative sources.
18 It is -- consider is the first step in a process.

19 Q. All right.

20 A. And after you consider, you act. And they may have
21 considered and there is -- there is -- there is text
22 that says we considered this but it goes no further than
23 that with respect to carrying it forward and carrying
24 multiple working hypotheses forward. And I'll go back
25 to the initial proposals to the City of Bangor. We can

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1 do it quickly, we can do it easily, and we can get you a
2 result quickly. And we can -- and we can -- my words,
3 not his -- we can point fingers and solve your problem.

4 Q. You have reviewed, I gather, all of the RMT reports in
5 this case?

6 A. I'm not sure what all is. I've -- I've reviewed the
7 reports that deal with the first set of borings. I've
8 dealt with the reports that deal with the second set of
9 borings. I dealt -- I reviewed the report that
10 described the third set of borings up to high 50s. I've
11 reviewed the risk assessment. I've reviewed the -- I've
12 looked at all of those that I've had and -- and I would
13 expect that that list is fairly comprehensive.

14 Q. You've reviewed their 1999 report?

15 A. Is that borings one through 30 something?

16 Q. Probably. It's the initial report that was issued a
17 couple of inches thick.

18 A. Yes.

19 Q. Have you reviewed the analyticals that go along with
20 that report?

21 A. I've reviewed the report.

22 Q. Have you reviewed the reports issued by META
23 Environment, M E T A?

24 A. Yes, I have.

25 Q. Have you referred -- reviewed the human health risk

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1 assessment that was performed by RMT?

2 A. Yes.

3 Q. And have you reviewed the ecological risk assessment
4 that was performed by RMT?

5 A. Yes.

6 Q. In your sense of the word quick, when RMT first
7 approached the city about the possibility of doing this
8 work, do you feel that the work that has been performed
9 by RMT was done quickly?

10 A. What I said was the initial proposal was one that
11 suggested that without interference of regulatory
12 agencies, we can do things quickly.

13 Q. If you were to investigate the possible contribution of
14 material from fires on the coal docks to the tar
15 deposits on the bottom of the Penobscot River, what
16 would you do?

17 A. I beg your pardon?

18 (The reporter read the requested matter.)

19 A. I would first understand the nature of the fires, the
20 volume of materials that were burned, the location of
21 those, as much information as I could get about the --
22 about the location and intensity and -- and duration of
23 the fires, how many fires occurred over time. Knowing
24 that fires occurred and what the product was that
25 burned, what would be the expected PAH distribution in

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1 terms of the nature of the PAH's and the distribution of
2 those PAH's in the vicinity.

3 When you have a fire that generates PAH's, there
4 is typically a -- a halo of PAH's that are deposited
5 around the location of the -- of the fire. DEP
6 experienced that several years ago when Bates -- Gates
7 Formed-Fibre in Auburn had a fire in their waste dump
8 and it's an organic material that spread a halo of PAH's
9 all around that facility. And so the -- understand the
10 nature and distribution of PAH's, where they would have
11 been deposited and what would be their ultimate fate
12 with respect to erosion and transport and then determine
13 if the PAH signatures in the river that you find at the
14 head of the cove and at the end of the cove are
15 compatible with the signatures that you would expect
16 from such an event.

17 Q. You have, I assume, because you've reviewed the META
18 Environmental report, you have seen the gas
19 chromatograms for various test samples taken from the
20 tar deposit on the bottom of the river in this case?

21 A. In the META report, I have seen portions of gas
22 chromatograms. I'm not sure that I have examined a lot
23 of gas chromatograms. I don't recall. I don't recall a
24 lot of gas chromatograms.

25 Q. If you don't know the answer to this question, it's fine

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1 but if you know, is the chemical signature of tar
2 produced by the pyrogenic process at a gas plant the
3 same as the chemical signature that is produced by PAH's
4 resulting from combustion of coal?

5 A. They're both pyrogenic.

6 Q. Right. Are the chemical signatures the same is the
7 question.

8 A. That was addressed to some extent in the deposition of
9 Mr. Mauro. As I recall, those pyrogenic signatures had
10 some similarity.

11 Q. Independent of Mr. Mauro's testimony, do you have
12 sufficient expertise to know the answer to that
13 question?

14 A. There are ratios of individual PAH's to one another that
15 characterize PAH's petrogenic, pyrogenic; and with the
16 understanding -- with sufficient analytical data and an
17 understanding of what ratios are required to
18 differentiate PAH's of different origin, I would be
19 capable of distinguishing those.

20 Q. Because the chemical signatures are different, correct?

21 A. No. I did not say that.

22 Q. Then how could you distinguish between them?

23 A. Well, I may not be able to distinguish between them
24 because they may be very similar. They are both
25 pyrogenic PAH's derived from coal if we are talking

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1 about PAH's derived in a MPG versus PAH's derived from a
2 coal fire.

3 Q. Would you describe the pyrogenic process involved with
4 an open air coal fire as aerobic or anaerobic?

5 A. I've not heard aerobic or anaerobic applied to that. It
6 would be -- there would -- this would -- it depends on
7 the nature of the coal pile, whether it's smoldering
8 underneath or whether it is burning on top and full
9 exposure to the atmosphere. If you refer to anaerobic
10 as something smoldering in a pile and not getting
11 oxygen, then there would be portions of the fire that
12 would be anaerobic. The newspaper accounts of that
13 certainly show that portions of the -- of the fire
14 were -- had plenty of oxygen and that the flames were
15 high.

16 Q. Flames --

17 A. But it's possible to have both -- both situations going
18 on. And I think that the fires that occurred there, a
19 number of them smoldered for days. Those would be ones
20 that were -- that were smoldering without sufficient
21 oxygen to burst into full flame.

22 Q. Is the process that creates coal tar at a gas plant
23 aerobic or anaerobic?

24 A. It's a destructive distillation where there's a lack of
25 oxygen.

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1 Q. What records exist with respect to the fires on the coal
2 docks?

3 A. One record are newspaper accounts.

4 Q. Okay.

5 A. There may be other records.

6 Q. If there were no other records hypothetically, would the
7 newspaper accounts be sufficient -- a sufficient base of
8 information for you to investigate? Again, we're back
9 in the hypothetical where you're doing this
10 investigation.

11 A. Yeah. It depends on the compendium and detail of the --
12 of the newspaper accounts. And newspaper accounts let
13 you know where it happened and how long it happened and
14 the -- and what people saw over a period of time. They
15 may be sufficient.

16 Q. Do you generally rely upon newspaper accounts in
17 performing the environmental investigations that you do?

18 A. As I look at site histories, which is a part of the work
19 that I do on a number of sites, I use many different
20 sources and if need be, newspaper accounts.

21 Q. Do you generally consider newspaper accounts to be a
22 reliable source of information?

23 A. Newspaper accounts are one source in a compendium of
24 information sources and they can often tell you things
25 that you can rely on.

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1 Q. Let's assume hypothetically all you've got is newspaper
2 accounts of a fire on a coal dock. How would you
3 determine whether what you were reading was accurate?

4 A. You don't just have a newspaper account. You know, if
5 you have a newspaper account, that is one thing. But
6 you also have the location, setting, and amount of coal
7 that was there, the nature of the -- of the setting and
8 then you have the newspaper account that layers on top
9 of that that there was a -- that there was a fire. And
10 so you -- you have -- you have the setting, you have the
11 fire, and so the newspaper account is -- is one -- is
12 one piece of that data set.

13 Q. In your opinion -- strike that.

14 In your designation that's been marked as Exhibit
15 Number 1, the bottom of page two, you make a reference
16 to apparent tar seeps. Can you find that for me?

17 A. The apparent tar seeps. Right.

18 Q. You got it. What did you mean by apparent?

19 A. There are -- what's the word -- blobs of -- blob is not
20 a bleb.

21 Q. I'll accept your representation.

22 A. There are -- there are deposits of tar or there are
23 extrusions of tar. There's manifestations of tar that
24 is along the riverbank. They are -- you asked what is
25 the -- what is the apparent. I have not sampled those,

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1 so I don't know what they are and you -- nobody knows
2 until they have sampled it.

3 Q. I guess what I was asking in a not very articulate way
4 was is the word apparent a term of art as you are using
5 it or is it like the word objective being used by you in
6 the ordinary everyday sense of that word?

7 A. It's being used in the ordinary everyday sense.

8 Q. And when you use that term, are you referring to an
9 appearance of tar that you saw when you were down there
10 or are you referring to some other source of
11 information?

12 A. I'm referring to what I saw.

13 Q. All right. Have you -- during the course of your
14 career, Dr. Tewhey, have you had occasion to do actual
15 field investigatory work with respect to tar seeps?

16 A. I -- working on behalf of Central Maine Power, I
17 conducted the initial site investigation which is a --
18 looking at the history of a site and doing a walk-over
19 of the site at Whites Wharf coal tar site in Biddeford,
20 Maine. The nature of the Biddeford -- the former MGP
21 site in Biddeford is that it sits adjacent to the Saco
22 River and there is a large crib stone wall that
23 separates the MGP site from the Saco River. An
24 investigation, I didn't drill holes and I didn't take
25 samples but I investigated that site with CMP people and

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1 what we saw is we saw coal tar up against the crib works
2 and the crib works on the outside stained with coal tar
3 that had -- that had been released from the coal tar
4 site and was -- there was evidence that it had gone over
5 and -- and into the crib stone -- crib stone facilities.

6 I have in the past two years investigated six coal
7 tar sites of MGP plants in the states of Georgia, West
8 Virginia, Pennsylvania, and Maryland and my purpose in
9 doing that was to evaluate those coal tar sites who had
10 filed claims of environmental insurance associated with
11 the sites and my job was to assess the validity of those
12 environmental claims and recommend remedial measures for
13 the sites and the cost of those remedial measures which
14 I have done. Those sites, I did not conduct sampling.
15 I reviewed sampling that was done by others and did a
16 careful reconnaissance of those sites interacted with
17 the state regulatory agencies with respect to what has
18 been done at the sites and what their expectation was
19 for further remediation or investigation or remediation.
20 Not further. They had not been remediated. And so the
21 answer is yes, I've investigated MGP sites and offered
22 opinions as to what the nature of the investigation and
23 cleanup should be.

24 Q. In performing a field investigation, does a field
25 geologist have to make certain judgment calls as to what

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1 substances will be tested and what will not?

2 A. Always.

3 MR. DEVOE: We have been going another hour. Why
4 don't we take another short break.

5 (A short break was taken.)

6 Q. Dr. Tewhey, earlier in our discussion today, I had asked
7 you to list instances where you were involved in
8 investigating the deposition of coal tar in river
9 sediments and we talked a bit about tidal influence and
10 you gave me a list of sites and then we went back
11 through them. Just before we broke, you listed some
12 coal tar sites that you had worked at in Georgia, West
13 Virginia, and other places, including Biddeford, Maine.
14 I wanted to be sure that we were as complete as we could
15 be in terms of your experience base and also that I
16 wasn't failing to ask a question that I need to ask in
17 order to establish that. With your indulgence, I'm
18 going to go back to the coal tar experience question.
19 Not the original but a new one.

20 A. Okay.

21 Q. And the new question is this, could you list for me, if
22 you can, every site that you have worked on that
23 involves investigation of some aspect of coal tar.

24 A. What we've talked about today is the Waterville site.

25 We have talked about the -- just before the break, the

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1 Whites Bridge site in Biddeford. And we have talked
2 about the six sites that I've looked at as part of the
3 Southern Company and Allegheny Energy.

4 Q. And there were the MGP sites in New York State.

5 A. That's right.

6 Q. And obviously Bangor.

7 A. Bangor. I'm working on a project right now. I'm the
8 technical director of a portion of a project where
9 there's a contract with Northern Utilities to -- kind of
10 a research project to look at the treatment and
11 disposal of NAPL, whether it's dense or light. And that
12 project will consist of literature search, evaluation of
13 remedial alternatives, and bench scale testing of
14 alternatives that seem favorable looking for new and
15 innovative ways of dealing with NAPL, N A P L, all caps,
16 and that project is just beginning.

17 Q. Does that complete the list of your coal tar experience?

18 A. I believe it does.

19 Q. Is the NAPL involved in the Northern Utilities case coal
20 tar?

21 A. It will be coal tar.

22 Q. Will be. Are you at liberty to give us the location?

23 A. We're going to be doing some work on the Fore River off
24 of Commercial Street with respect to field aspects of
25 that project.

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1 Q. That's the Northern Utilities case?

2 A. Right.

3 Q. Okay. And you say that's just getting started?

4 A. Yes.

5 Q. All right. The six sites in the southern tier of states
6 are in Georgia, West Virginia, Pennsylvania, and
7 Maryland?

8 A. That's correct.

9 Q. And your work there is on behalf of the Southern Company
10 and Allegheny Energy?

11 A. No. It's on behalf of an insurance company.

12 Q. What's the name of the carrier?

13 A. Lloyds of London. Equatas is a subsidiary of Lloyds
14 that deals with environmental insurance claims.

15 Q. And who is the underlying insured, if you know? Who is
16 the insured party?

17 A. In the case of -- it's Southern Company --

18 Q. Okay.

19 A. -- in the case of two MGP sites. In the case of four,
20 it's Allegheny Energy.

21 Q. In your work at the Waterville site, I gather you were
22 working for Central Maine Power?

23 A. I was. I was working with Haley & Aldrich but I believe
24 that I -- I submitted invoices directly to Central Maine
25 Power.

BOYCE & LEIGHTON

1 Q. You were hired by Haley & Aldrich?

2 A. I was hired by Central Maine Power.

3 Q. Okay. At the Whites Bridge Biddeford project, who were
4 you working for?

5 A. Central Maine Power.

6 Q. And I think we established who your client was in the
7 New York cases.

8 All right. I'd like to just go back, if I could,
9 and establish a clearer time line which may not be
10 possible but let's try. In terms of your initial
11 engagement in this case, you were contacted by Mr.
12 Ahrens in 2002 while still on the Board of Environmental
13 Protection, correct so far?

14 A. Yes. And I -- and I should state there was a very
15 informal -- informal connection.

16 Q. I understand. Subsequent to that communication, I
17 gather you heard from Mr. Littell, also of Mr. Ahrens'
18 office; is that correct?

19 A. That's correct.

20 Q. And if I understood what you told me earlier, in that
21 conversation with Mr. Littell, you were told more about
22 the case and there was a discussion about the people in
23 the case; am I correct?

24 A. Yes.

25 Q. And when did that conversation happen, if you know?

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1 A. Where?

2 Q. When.

3 A. I believe it was at the end of 2002 or the early part of
4 2003.

5 Q. Would it have been before or after you ceased being
6 chair of the BEP?

7 A. I ceased being chair in early December. So, it would
8 have been after.

9 Q. Would it have been before or after your term on the BEP
10 as a regular board member expired?

11 A. I believe it would have been before.

12 Q. Before it expired?

13 A. Yes.

14 Q. And when did you begin to receive documents from
15 Citizens' counsel that you were asked to review in
16 conjunction with this case?

17 A. I don't recall specifically but it was definitely after
18 I was through at the BEP.

19 Q. That you received the documents?

20 A. Yes.

21 Q. Was it after your term on the BEP had expired that you
22 visited the Bangor site?

23 A. Yes.

24 Q. Was it after your term on the board had expired that you
25 participated in the meeting in Augusta?

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- 1 A. Yes.
- 2 Q. How would we establish when your term expired?
- 3 A. You could call Terry Hanson at the Maine DEP.
- 4 Q. Is Terry a man or a woman?
- 5 A. Terry is a woman. She's the --
- 6 Q. I'm sorry.
- 7 A. She's the clerk of the board essentially.
- 8 Q. She would have a record of when your term expired?
- 9 A. She would.
- 10 Q. You have no recollection of having resigned your board
- 11 membership before it expired naturally?
- 12 A. I did not resign early.
- 13 Q. Okay. If you could turn to page three of your
- 14 designation. About the fourth line down from the top,
- 15 there is a sentence that begins there are elevated
- 16 levels. Do you see that?
- 17 A. Yes.
- 18 Q. When you use the term elevated in this context, what is
- 19 your benchmark; what are you referring to?
- 20 A. Very high levels in the order of tens or hundreds of
- 21 thousands of parts per million.
- 22 Q. Okay. Elevated -- I'm still trying to get a sense for
- 23 your reference point. When you say elevated, is it
- 24 elevated relative to background?
- 25 MS. GAYTHWAITE: In that particular sentence?

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1 MR. DEVOE: Right.

2 A. In light of the sentence that follows, yes, it would be
3 elevated with respect to the background levels.

4 Q. Okay. I see. The last sentence in that paragraph talks
5 about RMT's data and conservative assumptions. Do you
6 see that?

7 A. Yes.

8 Q. Your introductory clause is that you used RMT's data and
9 you used RMT's conservative assumptions. So, I'd like
10 to ask you, if I could, when you say conservative in
11 this sentence, what do you mean?

12 MS. GAYTHWAITE: Object to the form. I don't
13 think it says that RMT was conservative. I object to
14 the form of the question.

15 MR. DEVOE: That's an appropriate correction if
16 that's the right one. That's how I read it.

17 Q. And perhaps I'm misunderstanding you. Are you saying
18 your assumptions are conservative or that RMT's
19 assumptions were conservative?

20 A. My assumptions are conservative.

21 Q. I see. Okay. That's helpful. When you characterize
22 your assumptions as conservative, what do you mean?

23 A. That I have not -- I have -- I have used a -- not the
24 highest level for background that could be used.

25 Q. What do you feel the highest background number that

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1 could be used fairly in conjunction with Bangor would
2 be?

3 A. What I've suggested for use in this document is a
4 hundred parts per million of total PAH's.

5 Q. Do you feel that's at the upper end of the acceptable
6 range?

7 A. It is at the -- it is at the upper 75th quartile of the
8 acceptable range. You know, it could be -- could be
9 found that a higher number would be appropriate.

10 Q. I take it you have not actually done a study of the
11 Penobscot River to determine what its actual PAH
12 background level is; would that be correct?

13 A. I have not done a particular study of the Penobscot
14 River. I am aware of background levels in other similar
15 water bodies.

16 Q. All right. I'd like to explore that with you further in
17 just a moment but before I do, I'd like to ask you about
18 the first sentence of the first full paragraph on page
19 three in which -- talking about yourself in the third
20 person; although, probably not you talking -- there's a
21 reference to your investigation of many sites where
22 elevated PAH's have been found in sediments. Do you see
23 that sentence?

24 A. Yes.

25 Q. I've done my level best to get from you a complete list

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1 of your coal tar investigation experience. I hope I've
2 been complete. So -- but let me, at the risk of asking
3 you something that you've already answered, turn back to
4 that issue for just a moment and restricting your answer
5 now not to coal tar experience generally but to the
6 issue of sites where elevated PAH's have been found in
7 sediments that are related to coal tar -- in other
8 words, where the PAH's are related to coal tar, how many
9 such sites have you investigated?

10 A. I said -- I said earlier that -- that those sites that I
11 have worked on, there was no apparent MGP site adjacent
12 to those sites, not to say that there weren't MGP sites
13 and not always -- not always apparent and visible and
14 recognizable.

15 Q. But in terms of your knowledge and in terms of the
16 assumptions that you were working with at those sites,
17 you were not investigating coal tar entrained in the
18 sediments; you were looking at elevated PAH's deriving
19 from some other source; is that correct?

20 A. They could have been derived from some other source. To
21 the extent that creosote is a product of the destructive
22 distillation of coal, even though you don't have an MGP
23 site, you could have a process that resulted in PAH's
24 being present that come from a similar operation.

25 Q. Sure. I understand.

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1 In that paragraph of your designation, Dr. Tewhey,
2 this harkens to the hundred parts per million background
3 reference, you say -- and it's the fourth sentence in --
4 that depending on site specific data and conditions,
5 background levels -- I assume you're referring to in
6 Bangor -- may be higher. That is your opinion?

7 A. Yes.

8 Q. Is it your opinion that depending upon site specific
9 data and conditions, background levels could be lower?

10 A. It's unlikely in Dunnett's Cove that background levels
11 would be lower than that.

12 Q. What is the basis for your opinion?

13 A. Because the Penobscot River is a heavily used, heavily
14 industrialized river -- not only my opinion but at the
15 public meeting in Bangor, that was Mr. McLinn's opinion
16 also -- that the circumstances of Dunnett's Cove is such
17 that it is a slow water portion of the river and,
18 therefore, is an accumulator of sediments as we have
19 seen. Putting those two things together, it is
20 reasonable that background would be in the order of a
21 hundred parts per million.

22 Q. You specifically analogize the Bangor Landing waterfront
23 to the Portland Brownfields site in your designation.
24 Why don't you take a moment just to review that
25 paragraph.

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1 A. Okay.

2 A. Yes, I do.

3 Q. Is the Portland Brownfields site your only frame of
4 reference that leads you to conclude that in Bangor,
5 background is at least 100 parts per million or is your
6 frame of reference larger than that?

7 A. Frame of reference is larger than that.

8 Q. What specific sites inform your judgment about the
9 background in Bangor, Maine?

10 A. The site on the Fore River in South Portland.

11 Q. Okay.

12 A. Where dredged materials contain hundreds of parts per
13 million of PAH's.

14 Q. Anywhere else?

15 A. And the nature of dredged materials on the Kennebec
16 River where there were very, very low PAH's because the
17 site was on the straight stretch of the river and
18 certainly the Kennebec River is also an industrialized
19 river and BIW is a huge industrial site and yet the
20 materials -- the dredge materials coming out of there
21 are -- people stand in line to put that in their gardens
22 because of the very low PAH's that exist there. The
23 fact that the accumulation of PAH's in a river
24 environment is -- is dependent on the nature of the
25 river but also the nature of the flow in that river.

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1 Q. You have mentioned the Portland Brownfields site as
2 informing your judgment on this question, the Fore River
3 site, and the Kennebec River site. Are there others?

4 MS. GAYTHWAITE: Are there sites or just other
5 bases of information?

6 MR. DEVOE: Bases of information. Thank you.

7 A. The DEP has a study -- a 1989 study that I referred to
8 and used in a paper that I did with Lee Doggert and
9 Henry Gaudette and I think the title of the paper was
10 the Origin and Distribution of Toxic Chemicals in
11 Sediments of Casco Bay, Maine. The DEP had done a
12 cumulative curve of sediments associated with river or
13 estuarine environments in Maine and what that showed is
14 that the highest levels they found were on the order of
15 200 parts per million and the lowest levels they found
16 were less than a part per million.

17 Q. And this -- excuse me for interrupting -- this is
18 background?

19 A. This is background.

20 Q. Okay.

21 A. This is background.

22 Q. Go ahead.

23 A. And so about -- you know -- on the order of 20 percent
24 of the site -- 15 percent of the sites that they studied
25 in Maine had PAH levels in sediments that were greater

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1 than a hundred parts per million.

2 Q. Did that 1989 DEP study specifically evaluate background
3 in the Penobscot River to your knowledge?

4 A. I don't recall.

5 Q. Are you generally aware, Dr. Tewhey, that RMT, as part
6 of its investigation in this case, took a sample near
7 the Barrett Paving facility and determined the PAH level
8 to be about 100 parts per million?

9 A. I don't know if you're referring to a specific --
10 specific sample. But I know that there are samples in
11 the vicinity of Barrett Paving that were a hundred parts
12 per million or less of total PAH's.

13 Q. Are you aware that one of the samples obtained at the
14 distal end of what RMT refers to as the plume, the tar
15 deposit had total PAH's in the order of 56 parts per
16 million?

17 A. I don't know that specifically. I would have to refer
18 to diagrams.

19 Q. In your preparation for today's deposition or perhaps
20 generally, are you familiar with the Battelle
21 Corporation?

22 A. Yes.

23 Q. What is the Battelle Corporation?

24 A. Battelle Corporation, I've been familiar with them for a
25 number of years in that I worked for six years at the

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1 University of California Lawrence Livermore Laboratory
2 and the Battelle Pacific Northwest Laboratories were
3 considered, in essence, a sister laboratory doing the
4 type of work that Livermore did. And so I became aware
5 of Battelle at that time and I'm not sure what
6 transitions Battelle has been through but they continue
7 to exist and I'm aware of their presence.

8 Q. Have you ever had any professional contact with a Dr.
9 Allen Uhler, U H L E R?

10 A. I have not.

11 Q. Have you had any occasion in the context of your review
12 in this case to consider Dr. Uhler's work?

13 A. Well, if -- if you mean that my understanding is that
14 they did the analysis of the samples that Haley &
15 Aldrich took and so the results of -- I have looked at
16 the results of analysis of the Haley & Aldrich samples
17 and to the extent that Dr. Uhler or Battelle was
18 involved in those, I have -- I'm familiar with those
19 results.

20 Q. Would it be fair to say you have a fairly high regard
21 for the work performed by Battelle generally?

22 A. At the time that I worked with them, they were a
23 reputable laboratory. And I know of nothing that would
24 take that characteristic away.

25 Q. You have no personal familiarity with Dr. Uhler?

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1 A. I do not.

2 Q. Okay. I'd like to ask you to assume for my next series
3 of questions that Dr. Uhler is an employee of Battelle.
4 All right?

5 A. Yes.

6 Q. And I'd like to show you what I've marked as Deposition
7 Exhibit Number 2.

8 MR. DEVOE: These are copies for everybody.

9 Q. Dr. Tewhey, that's an article published by Dr. Uhler
10 that was provided to us in this case by Citizens. It
11 has a Bates stamp number BAT4801 through 4808. And it
12 is a discussion of urban background. Have you seen that
13 article before?

14 A. I have not.

15 Q. I would like to ask for your indulgence and take a five
16 or 10-minute break to give you an opportunity to read
17 it. It's fairly short. Thank you.

18 (A short break was taken.)

19 Q. Dr. Tewhey, we broke to give you an opportunity to
20 review the article co-authored by Dr. Uhler on urban
21 background. I'd like to ask some questions about that
22 article but before I do, I'd like to turn to a slightly
23 different subject, if I may.

24 Have you ever had occasion to differentiate in
25 your professional work between PAH's that are generated

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1 by substances like asphalt in comparing those to PAH's
2 generated by substances like oil waste; has that ever
3 been the subject of an investigation by you?

4 A. Did you use the word differentiate?

5 Q. I did.

6 A. And what method of differentiation are you specifically
7 asking about?

8 Q. Not a specific one. Just have you ever compared the two
9 in any manner?

10 A. Are you asking if I compared petrogenic versus
11 pyrogenic; is that what you are asking?

12 Q. I don't know if that's a distinction that bears on the
13 question or not.

14 A. Okay.

15 Q. Let me ask you a more specific question. It might help.

16 Did you ever have occasion to say in the context
17 of a written report authored by you that asphalt
18 contains high concentrations of PAH's but paved highways
19 are not considered to be hazardous waste sites?

20 A. I have taken -- I've taken -- I've done analysis of
21 asphalt and determined the PAH content and I know that
22 highways are not hazardous waste sites. I -- I could
23 have said that. I don't recall saying it.

24 Q. Do you recall?

25 MS. GAYTHWAITE: Do you want to see the document,

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1 Dr. Tewhey?

2 MR. DEVOE: No. I'm just asking if he recalls.

3 Q. Do you recall?

4 MS. GAYTHWAITE: And I asked him if he wanted to
5 see the document.

6 MR. DEVOE: I understand what you asked him.

7 A. If we're going to pursue questioning on a document that
8 I don't see, I would like to see it.

9 Q. I understand. Have you ever had occasion to opine that
10 in solid materials like asphalt and roofing shingles,
11 the PAH's are an integral, insoluble, and immobile part
12 of the solid matrix?

13 A. Could you repeat that one more time?

14 Q. Absolutely. The statement is in solid materials like
15 asphalt and roofing shingles, the PAH's are an integral,
16 insoluble, and immobile part of the solid matrix.

17 A. And your question with respect to that statement is?

18 Q. The question is do you recall ever having made that
19 statement?

20 A. I don't recall specifically having made that statement.

21 Q. Do you agree with that statement?

22 A. Say it one more time.

23 Q. Absolutely. In solid materials like asphalt and roofing
24 shingles, the PAH's are an integral, insoluble, and
25 immobile part of the solid matrix.

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1 A. And statements need to be considered in context and I
2 have a sense that you have a document that says that and
3 it is authored by me. That's my sense right now. And
4 so that is a generally true statement. Solubility --
5 did I say insoluble?

6 Q. You said insoluble.

7 A. Insoluble. And I think that is a generally true
8 statement. The -- the -- all things are soluble at some
9 level.

10 Q. Sure.

11 A. Including roofing shingles. That's the reason we have
12 to replace our roofs every 10, 20, or 30 years.

13 Q. Sure. Do you agree with this statement -- and this is
14 again referring back to asphalt and roofing shingles.
15 Although PAH's may be present at high concentrations in
16 these materials, the PAH compounds have very low aqueous
17 solubility and are tightly bound within the solid and
18 not available to the environment?

19 A. The types of PAH's that are -- that have very low
20 solubilities are the heavier PAH's and they are -- that
21 end of the PAH spectrum is prominent in asphaltic
22 materials. And I have -- I know I've written an opinion
23 with respect to those heavy PAH's as being quite
24 insoluble and not subject to ready release into the
25 environment. I have offered that opinion before as an

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1 expert.

2 Q. Do you agree with this statement that chemically --
3 again, referring to asphalt and roof shingles.

4 Chemically, the PAH's are stable within the solid matrix
5 and have no physical or chemical tendency to migrate to
6 the environment?

7 A. PAH's are stable within the matrix and have no chemical
8 or physical tendency to migrate to the environment. And
9 you need to -- you need to know in the context. You can
10 put them in something that dissolves PAH's and they
11 would -- and they would have a tendency to migrate. But
12 it's all a matter of degree. And again, I'm -- I don't
13 know the context of what you are presenting to me and so
14 with a qualified -- what's your question?

15 Q. My question was do you agree with that statement?

16 A. Tell me the statement -- oh, that was the one about
17 integral part of the matrix and there's no physical or
18 chemical incentive for them to migrate?

19 Q. Right.

20 A. That's basically a true statement.

21 Q. I'm now going to give you the context. The context is
22 work that you did in connection with Sullivan's Ledge
23 site in New Bedford, Massachusetts.

24 A. I figured that was it.

25 Q. You wrote a report?

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1 A. I did.

2 Q. Who were you working for?

3 A. I was working for New England Telephone through the law
4 firm of Foley, Hoag & Eliot.

5 Q. Did you give a deposition in that case?

6 A. I did not.

7 Q. Did you end up testifying at trial?

8 A. No.

9 Q. Was there a litigation?

10 A. On the basis of that report, New England Telephone was
11 excluded from the case on the basis of a summary
12 judgment.

13 Q. The issue in that case was potential contribution by the
14 telephone poles; isn't that correct?

15 A. That's correct.

16 Q. In that report -- I'm happy to show you the page but let
17 me just ask you if this is consistent with your
18 recollection. Is it consistent with your recollection,
19 sir, that in that case, corporate records of the New
20 Bedford Gas and Edison Light Company for the period 1935
21 to 1967 showed that at least 38,500 gallons of unsalable
22 tar was generated and disposed of?

23 A. I don't -- I have no recollection of that.

24 Q. Let me show you the page that I've highlighted for my
25 purposes and give you an opportunity to look at that.

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1 A. What would you like me to look at?

2 Q. The highlighted portion of that page.

3 MS. ANDERSON: Is this marked as an exhibit?

4 MR. DEVOE: Not yet.

5 MS. GAYTHWAITE: Details.

6 MR. DEVOE: What's that?

7 MS. GAYTHWAITE: I said details.

8 This is now Exhibit 4 and it's urban background
9 characterization of ambient --

10 THE DEPONENT: No.

11 MS. GAYTHWAITE: No. You're not going to put the
12 whole --

13 MR. DEVOE: I'm just going to put the page.

14 MS. GAYTHWAITE: I think the rules require you to
15 put the complete document.

16 MR. DEVOE: I don't have the complete document
17 with me. I'd be happy to mark as 4A the complete
18 document which is back in my office.

19 MS. GAYTHWAITE: Okay. Were all the sections you
20 just read from on this one page that's marked Exhibit 4?

21 MR. DEVOE: No. That's a very good point. What
22 I'll do is mark as 4B the page that I was referring to
23 earlier.

24 So the record is clear, 4A is the single page that
25 Dr. Tewhey is holding in his hand. 4B is the earlier

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1 page that I was quoting from and asking him questions
2 about. And 4A will be a complete copy of the expert
3 report.

4 MS. GAYTHWAITE: I think the record is now not
5 clear. Dr. Tewhey has in his hands Exhibit 4. You're
6 going to mark as Exhibit 4B the portion that you read
7 from previously?

8 MR. DEVOE: Yes.

9 MS. GAYTHWAITE: And you're going to provide 4A,
10 which is going to be the complete report?

11 MR. DEVOE: I thought that's what I said.

12 MS. GAYTHWAITE: That's not what you said.

13 MR. DEVOE: Then I stand corrected.

14 A. What was Exhibit 3?

15 Q. 3 was Dr. Uhler's -- you haven't seen 3. Dr. Uhler was
16 2.

17 MR. LASETER: Right.

18 A. And we're looking at 4 now.

19 Q. We are.

20 A. As opposed to 4B.

21 Q. Let me withdraw my question now that you've had an
22 opportunity to look at Exhibit 4 and ask you if you
23 recognize that as a page from your report?

24 A. It is, yeah. It is likely a -- a page from my report.

25 Q. I'll take that one, too. Thanks.

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1 All right. What I would like to do now is to ask
2 you just a few questions about Dr. Uhler's article which
3 is marked as Exhibit 2, if I may. First of all, Dr.
4 Tewhey, have you had an opportunity to review the
5 article?

6 A. I reviewed it. I'm a slow reader and so I have reviewed
7 it quickly rather than thoroughly but I have been
8 through every page and I understand the gist of the
9 article.

10 Q. Slow reading is a characteristic you and I share. I
11 won't fault you for that. If you need to take time to
12 understand any aspect of the article, please let me
13 know.

14 Turning to page two of the article, there is a
15 reference list identified as table one. Do you see
16 that?

17 A. Yes.

18 Q. These are various locations where -- that informed the
19 opinions that are presented in the article with respect
20 to urban background. Do any of the sites referenced in
21 table one -- strike that.

22 Are any of the sites in table one familiar to you
23 professionally?

24 A. Do you know where Bainbridge Island is in Washington?

25 Q. Personally, I don't.

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1 A. I've done some work dealing with sediments in
2 Bellingham, Washington, and I don't know if Eagle Harbor
3 or Bainbridge Island is near Bellingham, Washington.

4 Q. Let me ask you about the Bellingham. Was that a
5 creosote case, if you know?

6 A. There were PAH's involved in that as well as metals and
7 other -- and other substances. I neglected to mention
8 that because I didn't think of it earlier but with --
9 this was a trigger that made me recall that.

10 Q. All right. Did that Bellingham, Washington, case
11 involve the investigation of coal tar deposition in
12 river sediments?

13 A. It involved deposition of various substances where
14 flowing water bodies came into Bellingham Bay and I -- I
15 can't tell you if any MGP sites were in the vicinity.

16 Q. I think we got sidetracked and that's my fault. I had
17 asked you whether you recognized in a professional
18 capacity any of the sites listed in table one.

19 A. I'm going down through that.

20 Q. Sure.

21 A. And are you saying is there an awareness or have I been
22 involved?

23 Q. Using awareness in the professional sense, I meant
24 awareness.

25 A. Okay. In the study that I referred to previously, which

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1 was the Origin and Distribution of Toxic Chemicals in
2 Sediments of Casco Bay, Maine, I used information from
3 Boston Harbor to compare to Casco Bay sediments.

4 Q. Are you at all familiar in a professional sense with the
5 Elizabeth River in Norfolk, Virginia, site?

6 A. No.

7 Q. How about the Thea Foss Waterway in Tacoma?

8 A. No.

9 Q. If I were to suggest to you that both the Elizabeth
10 River and Thea Foss sites were MGP related, would that
11 trigger any recollection?

12 A. No.

13 Q. Okay. Let me step back from the Uhler article for just
14 a moment and ask you a much more general question. We
15 have been talking a bit this morning about background
16 levels of PAH's in water bodies. Have you ever been
17 called upon to personally determine background PAH's in
18 a water body; in other words, to do that study and to
19 formulate an opinion as to what background is in a given
20 water body?

21 A. I have -- I have done that before but I'm having
22 difficulty coming up with a specific site. I -- on the
23 Penobscot River at Orrington, I spent about three years
24 working on the Holtrachem site. You're talking about
25 PAH's?

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1 Q. I am.

2 A. You're talking about PAH's.

3 Q. Yes.

4 A. That was dealing with mercury.

5 Q. That was mercury?

6 A. Mercury.

7 Q. With respect to other sites where you personally
8 calculated background for water bodies, can you think of
9 any background for PAH's?

10 A. Yeah. I've calculated background in soils but I am
11 not -- I'm not recalling any site.

12 Q. The Uhler article is focused on water bodies.

13 A. These are sediments.

14 Q. Sediments?

15 A. Sediments. Marine sediments and freshwater sediments or
16 just marine sediments. I'd say they are marine
17 sediments.

18 Q. Are you thinking?

19 A. Is it my turn or your turn?

20 Q. It's probably my turn. In your last answer, when you
21 were saying that you have calculated background in soils
22 but not in water bodies, have you calculated background
23 in sediments?

24 A. I talked to you about in the Orrington site, we were
25 looking for upriver, downriver differences in mercury

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1 and so we were -- in calculating upriver content of
2 mercury in sediments in the Penobscot River, that was
3 considered background to where the Holtrachem site had a
4 discharge to the river and so it could be considered
5 background.

6 Q. All right. Setting that example aside, have you had
7 other occasions to calculate background of PAH's in
8 sediments?

9 A. I'm not thinking of P -- I'm not thinking of any of
10 PAH's in sediments.

11 Q. Okay. If you could turn to page -- I think you're on
12 page two of Dr. Uhler's article. Toward the bottom of
13 that page, there is a paragraph that --

14 A. And I'm going to take that back.

15 Q. Okay. Take it back.

16 A. Okay. That the paper that we're -- that I've referred
17 to earlier about toxic sediments in Casco Bay, that
18 involved a number of analytes, metals, and PAH's and we
19 looked at what -- what -- what the background levels of
20 PAH's in Casco Bay were. I also was designated to put
21 together the presentation -- there was a Casco Bay study
22 done several years ago about sedimentation in Casco Bay
23 that went on for a number of years and I put together
24 the final presentation that was done for the public and
25 in doing that, sorted through data and made a

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1 determination that was reviewed by others on what should
2 be presented to the public and so did an evaluation of
3 background of various parameters in the Casco Bay
4 environment. I'm through.

5 Q. Okay. Do you recall what your -- what the determination
6 was about background PAH's in Casco Bay?

7 A. Casco Bay, the -- I think the max concentrations were on
8 the order of 20 parts per million total PAH's and the
9 average was something less than that.

10 Q. Typically, background PAH's are calculated according to
11 a bell curve; would you agree?

12 A. Bell curve would be used in doing that, yes.

13 Q. So, generally speaking, the maximum concentration would
14 not be referred to as background?

15 A. It would be a number in the -- right. In your table at
16 the end of this paper, it -- it gives mean, median --

17 Q. Standard deviation.

18 A. Standard deviation. Minimum and maximum.

19 Q. Let me just hasten to say it's not my table.

20 A. Okay. And they don't use the maximum for the
21 background; although, it is a factor that they report.

22 Q. Sure. Now, turning back to page two, if you would, sir,
23 page two of the article, the paragraph at the very
24 bottom of page two that begins the available data. Do
25 you see that?

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1 A. The available data.

2 Q. Do you agree with that sentence; in other words, do you
3 agree that in calculating background, the available data
4 from each study -- strike that.

5 The method used in the article was to take the
6 available data from each study and to eliminate
7 sediments that were impacted by various point sources of
8 PAH's. In calculating background for sediments, would
9 you agree that that method is appropriate?

10 A. It says the available data from each study were reviewed
11 to eliminate sediments that were impacted by various
12 point sources of PAH's. And so what this paper is
13 trying to accomplish is give a -- to give a broad
14 background. That's curious in that on the final table,
15 if we look at Boston Harbor, the third column over from
16 the right, Boston Harbor CSO, where they give a max
17 concentration of 136,000 parts per billion, 136 parts
18 per million, does that suggest that that 136 was not
19 used in determining background. I would say that it was
20 used in determining background. And so the -- available
21 data from each study were determined to eliminate
22 sediments that were impacted by various point sources of
23 PAH's. And your question is do I agree with that
24 statement?

25 Q. Let me clarify because I think we may be getting off

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1 track. So --

2 (A short break was taken.)

3 Q. Dr. Tewhey, we had to break because the court reporter's
4 battery ran out; and because I'm not sure where we were,
5 I'm going to withdraw whatever question might have been
6 pending and ask you this question.

7 A. Okay.

8 Q. I'm not interested in knowing your opinion whether Dr.
9 Uhler followed the methodology that he describes. What
10 I'm asking is whether, in your opinion, in making a
11 calculation about background in sediments, PAH
12 background, it is appropriate to eliminate sediments
13 that have been impacted by various point sources of PAH?

14 A. I think that depends on the scope of your background
15 study.

16 Q. What do you mean by that?

17 A. If you were calculating a background for a wide expanse
18 of area such as Boston Harbor and there was a point
19 source of limited aerial extent that had a very high
20 value and that would serve to skew your background
21 study, there may be grounds for eliminating that because
22 a small area would have an influence and maybe a
23 substantial one over a large -- a large area. So, if
24 you had -- available data from each study were reviewed
25 to eliminate sediments that were impacted by various

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1 point sources of PAH -- let me read on.

2 Q. Don't read it into the record. If you need to read it
3 for your own purposes --

4 A. I'm not going to.

5 Q. Go ahead and just read it to yourself.

6 A. Yeah. Okay. And so the next sentence is this data
7 review resulted in a subset of sediments from each study
8 that was believed to have been impacted by urban
9 background alone. So, they are talking about what came
10 off the streets, what came -- what came down from cars.
11 They are looking for urban background. They are looking
12 for a specific quantity. And that is urban background.
13 They are not looking for industrial sources. And so
14 they are looking for a specific quantity from urban
15 environments that eliminates industrial discharges.
16 They are looking for a particular screening value and,
17 therefore, you eliminate industrial input in order to
18 get the urban value. And so, yes, because they had a
19 particular study that they were doing and they would
20 eliminate those things that were not part of that study.
21 In fact, they -- they make a list at the beginning.
22 They are looking for --

23 Q. Where are you referring to?

24 A. I'm looking at the abstract.

25 Q. Oh. Page one.

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1 A. Yes. They are looking for direct atmospheric fallout of
2 combustion derived particulates. That's from cars and
3 engines. They are looking for oils washed from surfaces
4 and drains during storm events. And so they are looking
5 for a subset of all of those things that can contribute
6 to sediments that are adjacent to urban environments.
7 And so they eliminate those that are specific point
8 sources that might not be characteristic of all harbors
9 or estuaries in their study. And so they are looking
10 for comparisons, comparison of the -- of the autos and
11 the storm events in Boston compared to the autos and the
12 storm events in Washington. And I could see, because
13 they have a particular focus of this study, that they
14 would eliminate specific point sources that were -- that
15 would skew their study and keep them from preparing --
16 comparing urban environments in one place with that of
17 another.

18 So, yes, they would do that in this case but they
19 might not -- you might not do that if you were looking
20 for the totality of what was occurring at a specific
21 location.

22 Q. In -- when you talk about background in the Bangor
23 Landing location, I take it you are talking -- you are
24 using the term background in a different sense than you
25 think Dr. Uhler is in this article?

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1 A. It is all -- it is background in the same sense as --
2 except that Dr. Uhler is looking at background over a
3 very broad area. I am looking at the background in
4 Dunnett's Cove.

5 Q. All right.

6 A. I'm not looking at the background in the Penobscot
7 River.

8 Q. All right. Restricting the focus to Dunnett's Cove, do
9 you feel that you are using the word background in a
10 manner differently than Dr. Uhler is using it in his
11 article?

12 A. If all of the sources that Dr. Uhler uses, if there were
13 no cars, if there were no airplanes, if there were no
14 storms, if there was no dust, and they cleaned up Boston
15 Harbor, then there would be nothing left to replenish
16 that and, therefore, he's measuring background; and if
17 they -- if they did clean it up and the urban life
18 continued, then that would be replenished.

19 Q. Okay. That wasn't my question. My question was
20 whether --

21 A. Yeah. Okay. You didn't let me finish my answer,
22 though.

23 Q. Let me be sure to do that.

24 A. Okay. And in the same manner, because of the unique
25 characteristics of Dunnett's Cove, if you cleaned up the

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1 hundred parts per million, what I say is that you let
2 the river flow and you let things happen and you would
3 get that level back again through background.

4 Q. Do you feel that you are using the term background in
5 the context of Dunnett's Cove differently than Dr. Uhler
6 is using it in his article?

7 MS. GAYTHWAITE: I think he's already answered
8 that question a couple of times. You can answer it
9 again, Dr. Tewhey.

10 A. I made a specific comparison of how I'm using it and so
11 I -- I refer to the way that he could use it and the way
12 that I am using it.

13 Q. Let me refer you to page -- well, before I go there, let
14 me refer you to page six of the article. On that page,
15 the second full sentence begins while there is a
16 general. Do you see that?

17 A. I read that statement several times.

18 Q. That statement talks about a general consistency from
19 one location to another but it ends with the observation
20 that there are definite differences in different
21 locations. Would you agree with the general proposition
22 that urban settings differ one from another to the
23 extent that each one is -- is unique in some respect?

24 A. That's -- that's what that -- and I think that was one
25 of the purposes of the study, to understand that

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1 uniqueness. And so while he eliminated things that
2 would -- that would specifically cause uniqueness, after
3 eliminating those, he found that urban environments were
4 not unique and he eliminated some variables from his
5 study.

6 Q. All right. So, if I -- did you finish this time?

7 A. I did.

8 Q. Okay. So, if I'm understanding you correctly, in order
9 to properly evaluate background in a given urban
10 setting, you would have to study the unique
11 characteristics of that setting; is that what you're
12 telling me?

13 A. In order for your study to be meaningful and give you
14 the result that you are intending, as this paper does,
15 you need to look at the particular circumstances.

16 Q. If you could turn back to page four of Dr. Uhler's
17 article. Toward the bottom of that page, I just want to
18 be sure that we are talking about the same thing.
19 There's a sentence at the very bottom of the page that
20 begins the vast majority. Do you see that?

21 A. Yes.

22 Q. And what he says is the vast majority of the urban
23 background impacted sediments studied contained less
24 than 20,000 micrograms per kilogram of priority
25 pollutant PAH and less than 30,000 micrograms per

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1 kilogram of total PAH Sigma 43.

2 First of all, just so that we're talking apples
3 and apples, 20,000 micrograms per kilogram is 20 PPM;
4 would you agree?

5 A. That's correct.

6 Q. 30,000 micrograms per kilogram is 30 PPM; would you
7 agree?

8 A. That's correct.

9 Q. What is the distinction that -- if you know -- is being
10 drawn here between priority pollutant PAH's and total
11 PAH's Sigma 43?

12 A. In the Sigma 43, they've included alkynated -- alkylated
13 PAH's and so they include more species of PAH than the
14 17 or 18 PAH's that are typically analyzed in a
15 laboratory.

16 MS. GAYTHWAITE: Do you have a question pending,
17 counsel?

18 MR. DEVOE: No. I'm wondering if he's done with
19 his answer.

20 A. Yes, I am.

21 Q. You have a very studious demeanor and it's not always
22 clear to me whether you're done or just thinking.

23 Dr. Tewhey, when you are referring to background
24 PAH's in the context of, let's say, the Portland
25 Brownfields site, are you referring to priority

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1 pollutant PAH's or are you referring to the fuller range
2 of Sigma 43 PAH's?

3 A. I'm referring to the set of PAH's you typically get in
4 an analysis -- 8270 analysis which involves the priority
5 pollutant PAH's.

6 Q. Dr. Tewhey, turning back to Exhibit Number 1.

7 MS. GAYTHWAITE: Is that his designation?

8 MR. DEVOE: It is.

9 Q. If you could turn to page four, there's a bullet at the
10 top and then there's an unbulleted paragraph that begins
11 Dr. Tewhey may also use a graph. Do you see that?

12 A. Yes.

13 Q. Has that graph been produced?

14 A. Was that graph produced to you?

15 Q. Has it been produced by you?

16 A. I'm not sure.

17 MS. GAYTHWAITE: If I can help, counsel. I think
18 that we produced those documents.

19 MR. DEVOE: I'm not questioning that part of it.
20 I just wanted to be sure we're talking about the same
21 thing.

22 Q. Has that document been produced by you?

23 MS. GAYTHWAITE: You're asking Dr. Tewhey whether
24 he created a document that shows the different
25 concentrations of PAH's?

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1 MR. DEVOE: I'm asking whether he produced the
2 graph referenced in Exhibit 1.

3 A. That would -- that would be it.

4 Q. That?

5 A. Yes.

6 Q. And I'm going to mark it.

7 So the record is clear and I understand you, Dr.

8 Tewhey, Exhibit Number 5 is the graph referenced in your
9 designation; is that correct?

10 A. Yes.

11 Q. All right. I'm done with that.

12 Further on down page four, there is a reference to
13 your testimony within the last four years.

14 A. Yes.

15 Q. There are three bulleted items, one of which is less
16 specific than the others. It's a case involving Black &
17 Decker?

18 A. Yes.

19 Q. Do you recall more specifically as you sit here the name
20 of that case?

21 A. It is Black & Decker versus Liberty Mutual Insurance
22 Company.

23 Q. What court was that case pending in?

24 A. The case is being tried in federal court in
25 Massachusetts.

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1 Q. You say that's a pending case?

2 A. At first, there's six different sites and each site is
3 going to be tried separately. Two sites have been tried
4 in the last month.

5 Q. All right. What is the nature of the environmental
6 issue in that case?

7 A. Each site has a different environmental issue. The site
8 that I was involved in in January involved chlorinated
9 solvents being released into the subsurface environment.

10 Q. What was the nature of the -- strike that.

11 Was your deposition testimony in the Crown Cork &
12 Seal case in the nature of expert testimony?

13 A. Yes.

14 Q. What was the nature of the issue you were offering
15 opinions about?

16 A. Whether the timing of degradation of chlorinated
17 solvents in the environment can be done. The timing --
18 that is, looking at the degradation products and working
19 backwards to give a precise time as to when the
20 chlorinated solvents undegraded first entered the
21 environment.

22 Q. And the State of Vermont case?

23 A. That's a criminal case involving the release of gasoline
24 from underground storage tanks that went on for a very
25 long time and impacted a large area, including fumes in

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1 people's basements.

2 Q. Who were you working for in that state?

3 A. State of Vermont.

4 Q. What was the nature of the issue that you were
5 testifying about?

6 A. It's hydrogeologic in nature. The fate and transport of
7 gasoline flowing in the subsurface.

8 MR. DEVOE: Let's take a short break and I may be
9 close to done.

10 (A short break was taken.)

11 MR. DEVOE: That's all I have. Thank you, Dr.
12 Tewhey.

13 THE DEPONENT: Thank you.

14 (The deposition ended at 12:49 p.m.)

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1 I, JOHN D. TEWHEY, PH.D., do hereby certify
2 that the foregoing testimony taken on February 25, 2004,
3 is true and accurate to the best of my knowledge and
4 belief.

5

6

7 DATE JOHN D. TEWHEY, PH.D.

8

9 At in said County of
10 , this day of , 2004, personally
11 appeared JOHN D. TEWHEY, PH.D., and he made oath to the
12 truth of the foregoing answers by him subscribed.

13 Before me, , Notary Public

14

15

16 My Commission Expires:

17

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1 STATE OF MAINE

2 I, Doreen J. Boyce, RPR, a Notary Public
3 in and for the State of Maine, do hereby certify that
4 pursuant to notice there came before me on February 25,
5 2004, the following-named person to wit: JOHN D.
6 TEWHEY, PH.D., who was duly sworn to testify to the
7 truth and nothing but the truth; that he was thereupon
8 carefully examined upon his oath and his examination
9 reduced to writing under my supervision; that this
10 deposition is a true record of the testimony given by
11 the witness.

12 I further certify that I am neither attorney
13 nor counsel for, nor related to, nor employed by any of
14 the parties to the action in which this deposition is
15 taken, and further, that I am not a relative or employee
16 of any attorney or counsel employed by the parties
17 hereto, or financially interested in this action.

18 IN WITNESS WHEREOF, I have hereunto set my hand
19 this day of , 2004.

20

21

22

Doreen J. Boyce, RPR

23

My Commission Expires
March 25, 2006

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March 2, 2004

Martha Gaythwaite, Esq.
Friedman, Gaythwaite
Six City Center
Portland, ME 04101

RE: City of Bangor vs. Citizens, et al.

Enclosed please find your copy of the deposition of JOHN D. TEWHEY, PH.D., taken in the above-mentioned action on February 25, 2004. Also enclosed is the original signature page and a sheet for corrections.

Please have JOHN D. TEWHEY, PH.D. read your copy of the deposition and sign the original signature page before a Notary Public. If there are any corrections he wishes to make, they should be made on the enclosed correction sheet. Do not mark on the deposition.

Please send a copy of the signed original signature page and correction sheet to other counsel within 30 days.

Thank you.

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THE ORIGINAL DEPOSITION OF JOHN D. TEWHEY, PH.D. SHOULD
INCLUDE THE FOLLOWING CORRECTIONS:

Page	Line	Change from this	To this
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JOHN D. TEWHEY, PH.D.

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I N D E X

WITNESS:

EXAMINATION-BY ATTY. DEVOE:

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